

b.) Amendments to the Claims:

Please add new Claim 7 and amend Claims 1-6 and as follows. The status of all the claims is listed below.

1. (Currently amended) An electron source manufacturing apparatus comprising:

- (a) a support having a groove on its surface, which supports a substrate having a conductor formed thereon, wherein the support ~~[[and]]~~ has means a temperature adjuster for adjusting a temperature of the substrate;
- (b) a vessel which has a gas inlet port and a gas exhaust port and covers part of the substrate;
- (c) means a gas controller for introducing and exhausting gas into and from said vessel; and
- (d) means a voltage applier for applying a voltage to the conductor, wherein
part of said support has a groove a periphery of a region where the conductor is formed on the substrate is arranged along the groove.

2. (Currently amended) An electron source manufacturing apparatus comprising:

- (a) a support having a groove on its surface, which supports a substrate having a plurality of conductors each comprising a pair of electrodes and a conductive film formed between the electrodes;

(b) a vessel which covers part of the substrate;

(c) ~~means~~ a gas controller for introducing and exhausting gas into and from a space defined by said vessel and the substrate; and

(d) ~~means~~ a voltage applier for applying a voltage to each conductor, wherein

~~said support has a groove~~ a periphery of a region where the plurality of conductors are formed on the substrate is arranged along the groove.

3. (Currently amended) An electron source manufacturing apparatus comprising according to claim 1 or 2, wherein the groove is formed along a periphery of a region where the conductor is laid out:

(a) a support having a groove on its surface, which supports a substrate having a conductor formed thereon;

(b) a vessel which covers part of the substrate and which form a space including the conductor, wherein the space is defined by the vessel and the substrate;
and

(c) a voltage applier for applying a voltage to the conductor,
wherein a periphery of a region where the conductor is formed on the substrate is arranged along the groove.

4. (Currently amended) An apparatus according to ~~claim 1 or 2~~ any one of claims 1-3, wherein in which the groove is substantially rectangular rectangularly formed along a periphery of a region where the conductor is laid out.

5. (Currently amended) An apparatus according to ~~claim 3~~ any one of claims 1-3, ~~wherein one~~ in which an inner end of the groove is located by not less than 1 mm inward from the periphery.

6. (Currently amended) An apparatus according to ~~claim 3~~ any one of claims 1-3, ~~wherein the other~~ in which an outer end of the groove is located by not less than ~~[[1]]~~ 10 mm inward outward from the periphery.

7. (New) An electron source manufacturing apparatus comprising:

(a) a support having a groove on its surface, which supports a substrate having a conductor formed thereon, wherein the support has a temperature adjuster for adjusting a temperature of the substrate;

(b) a vessel which has a gas inlet port and a gas exhaust port and covers part of the substrate;

(c) a gas controller for introducing and exhausting gas into and from said vessel; and

(d) a voltage applier for applying a voltage to the conductor,
wherein

a periphery of a region where the conductor is formed on the substrate is arranged along the groove and between opposed walls of the groove.